

Table of Contents

VOLUME 113 (2002)

Editorials

- Successive signal representation in noise in dyslexics
S. Nagarajan (USA) 459
- An emerging role for event-related potentials in the assessment of brain injury
M. Gaetz (USA, Canada) 1665

Obituary

- Bernd-Ulrich Meyer, MD, 1960–2001, and his wife Simone Roericht, MD, 1965–2001
R. Benecke (Germany) 765

Invited Review

- Brain–computer interfaces for communication and control
J.R. Wolpaw, N. Birbaumer, D.J. McFarland, G. Pfurtscheller, T.M. Vaughan (USA, Germany, Italy, Austria) 767

Reviews

- Electrophysiology of radiculopathies
M.A. Fisher (USA) 317
- Technical aspects and utility of fMRI using BOLD and ASL
J.A. Detre, J. Wang (USA) 621
- Neurophysiological correlate of clinical signs in Parkinson's disease
J. Valls-Solé, F. Valldeoriola (Spain) 792
- Carpal tunnel syndrome: pathophysiology and clinical neurophysiology
R.A. Werner, M. Andary (USA) 1373
- EEG–EMG, MEG–EMG and EMG–EMG frequency analysis: physiological principles and clinical applications
P. Grosse, M.J. Cassidy, P. Brown (UK) 1523
- Spike detection: a review and comparison of algorithms
S.B. Wilson, R. Emerson (USA) 1873

Original Research Articles

- Sound motion evoked magnetic fields
J. Xiang, S. Chuang, D. Wilson, H. Otsubo, E. Pang, S. Holowka, R. Sharma, A. Ochi, S. Chitoku (Canada) 1
- Abnormalities of somatosensory evoked potentials in konzo – an upper motor neuron disorder
D. Tshala-Katumbay, K. Edebol Eeg-Olofsson, T. Kazadi-Kayembe, P. Fällmar, T. Tylleskär, T. Kayembe-Kalula (Congo, Sweden, Norway) 10
- Somatosensory processing during movement observation in humans
S. Rossi, F. Tecchio, P. Pasqualetti, M. Olivelli, V. Pizzella, G.L. Romani, S. Passero, N. Battistini, P.M. Rossini (Italy) 16
- Temporo-spatial correlations between scalp and centromedian thalamic EEG activities of stage II slow wave sleep in patients with generalized seizures of the cryptogenic Lennox–Gastaut syndrome
M. Velasco, A. Eugenia-Díaz-de Leon, I. Márquez, F. Brito, J.D. Carrillo-Ruiz, A.L. Velasco, F. Velasco (Mexico) 25
- Wavelet-crosscorrelation analysis can help predict whether bursts of pulse stimulation will terminate afterdischarges
Y. Mizuno-Matsumoto, G.K. Motamedi, W.R.S. Webber, R.P. Lesser (USA, Japan) 33
- Visualization of significant ERD/ERS patterns in multichannel EEG and ECoG data
B. Graimann, J.E. Huggins, S.P. Levine, G. Pfurtscheller (Austria, USA) 43
- Modeling of post-surgical brain and skull defects in the EEG inverse problem with the boundary element method
C.G. Bénar, J. Gotman (Canada) 48

Location of innervation zones of sternocleidomastoid and scalene muscles – a basis for clinical and research electromyography applications	
D. Falla, P. Dall'Alba, A. Rainoldi, R. Merletti, G. Jull (Australia, Italy)	57
Postoperative nerve conduction changes after open and endoscopic carpal tunnel release	
S. Uchiyama, H. Toriumi, H. Nakagawa, M. Kamimura, N. Ishigaki, T. Miyasaka (Japan)	64
A new clinical scale of carpal tunnel syndrome: validation of the measurement and clinical-neurophysiological assessment	
F. Giannini, R. Cioni, M. Mondelli, R. Padua, B. Gregori, P. D'Amico, L. Padua (Italy)	71
Corticospinal volleys and compound muscle action potentials produced by repetitive transcranial stimulation during spinal surgery	
K. Bartley, I.J. Woodforth, J.P.H. Stephen, D. Burke (Australia)	78
Subdyskinetic apomorphine responses in globus pallidus and subthalamus of parkinsonian patients: lack of clear evidence for the 'indirect pathway'	
A. Stefani, A. Bassi, P. Mazzone, M. Pierantozzi, G. Gattoni, M.G. Altibrandi, P. Giacomini, A. Peppe, G. Bernardi, P. Stanzione (Italy)	91
Subthreshold low frequency repetitive transcranial magnetic stimulation selectively decreases facilitation in the motor cortex	
J.R. Romero, D. Anschel, R. Sparing, M. Gangitano, A. Pascual-Leone (USA)	101
Deep brain stimulation of both subthalamic nucleus and internal globus pallidus restores intracortical inhibition in Parkinson's disease paralleling apomorphine effects: a paired magnetic stimulation study	
M. Pierantozzi, M.G. Palmieri, P. Mazzone, M.G. Marciani, P.M. Rossini, A. Stefani, P. Giacomini, A. Peppe, P. Stanzione (Italy)	108
Descending volleys evoked by transcranial magnetic stimulation of the brain in conscious humans: effects of coil shape	
V. Di Lazzaro, A. Oliviero, F. Pilato, E. Saturno, A. Insola, P. Mazzone, P.A. Tonali, J.C. Rothwell (Italy, UK)	114
Inverse correlation of intracortical inhibition and brain-stem inhibition in humans	
M. Sommer, A. Heise, F. Tergau, W. Paulus (Germany)	120
Effects of attention and precision of exerted force on beta range EEG-EMG synchronization during a maintained motor contraction task	
R. Kristeva-Feige, C. Fritsch, J. Timmer, C.-H. Lücking (Germany)	124
Transcranial magnetic stimulation of motor pathways directed to muscles supplied by cranial nerves in amyotrophic lateral sclerosis	
M.T. Desiato, G. Bernardi, A. Hagi H., L. Boffa, M.D. Caramia (Italy)	132
Do high or low doses of anxiolytics and hypnotics affect mismatch negativity in schizophrenic subjects? An EEG and MEG study	
K. Kasai, H. Yamada, S. Kamio, K. Nakagome, A. Iwanami, M. Fukuda, M. Yumoto, K. Itoh, I. Koshida, O. Abe, N. Kato (Japan, USA)	141
Auditory event-related potentials during target detection are abnormal in mild cognitive impairment	
E.J. Golob, J.K. Johnson, A. Starr (USA)	151
Involuntary attention in children as a function of sound source location: evidence from event-related potentials	
A. Shestakova, R. Čeponiene, M. Huotilainen, K. Yaguchi (Finland, Japan)	162
Ipsi- and contralateral EEG reactions to transcranial magnetic stimulation	
S. Komssi, H.J. Aronen, J. Huttunen, M. Kesäniemi, L. Soinne, V.V. Nikouline, M. Ollikainen, R.O. Roine, J. Karhu, S. Savolainen, R.J. Ilmoniemi (Finland)	175
Neurophysiological and behavioral concomitants of mild brain injury in collegiate athletes	
S. Slobounov, W. Sebastianelli, R. Simon (USA)	185
EEG differences between good and poor responders to methylphenidate and dexamphetamine in children with attention-deficit/hyperactivity disorder	
A.R. Clarke, R.J. Barry, R. McCarthy, M. Selikowitz (Australia)	194
Trial-to-trial variability of cortical evoked responses: implications for the analysis of functional connectivity	
W.A. Truccolo, M. Ding, K.H. Knuth, R. Nakamura, S.L. Bressler (USA)	206
High-resolution EEG: on the cortical equivalent dipole layer imaging	
B. He, D. Yao, J. Lian (USA)	227
Human masseter inhibitory reflexes evoked by repetitive electrical stimulation	
P.O. Hansen, P. Svensson, L. Arendt-Nielsen, T.S. Jensen (Denmark)	236
L-dopa effects on preprogramming and control activity in a skilled motor act in Parkinson's disease	
F. Fattapposta, F. Pierelli, F. My, M. Mostarda, S. Del Monte, L. Parisi, M. Serrao, A. Morocutti, G. Amabile (Italy)	243
The effects of alteration of effector and side of movement on movement-related cortical potentials	
G. Dirnberger, C.E. Kunaver, T. Scholze, G. Lindinger, W. Lang (Austria)	254
Intra- and interindividual variability of motor responses to repetitive transcranial magnetic stimulation	
M. Sommer, T. Wu, F. Tergau, W. Paulus (Germany)	265
Perceptual and motor contributions to performance and ERP components after incorrect motor activation in a flanker reaction task	
D. Van 't Ent (The Netherlands)	270
Single motor axon conduction velocities of human upper and lower limb motor units. A study with transcranial electrical stimulation	
F. Dalpozzo, P. Gérard, V. De Pasqua, F. Wang, A. Maertens de Noordhout (Belgium)	284

Reciprocal Ia inhibition in patients with asymmetric spinal spasticity Y. Okuma, Y. Mizuno, R.G. Lee (Japan, Canada)	292
Pain-related magnetic fields evoked by intra-epidermal electrical stimulation in humans K. Inui, T.D. Tran, Y. Qiu, X. Wang, M. Hoshiyama, R. Kakigi (Japan)	298
Galvanic-evoked myogenic responses in patients with an absence of click-evoked vestibulo-collic reflexes T. Murofushi, H. Takegoshi, M. Ohki, H. Ozeki (Japan)	305
Properties of human skin mechanoreceptors in peripheral neuropathy K. Mizobuchi, S. Kuwabara, S. Toma, Y. Nakajima, K. Ogawara, T. Hattori (Japan)	310
Electrophysiological assessment of the effect of intrathecal baclofen in spastic children B. Dachy, B. Dan (Belgium)	336
Pseudo-bilateral hand motor responses evoked by transcranial magnetic stimulation in patients with deep brain stimulators A.A. Kühn, T. Trottenberg, A. Kupsch, B.-U. Meyer (Germany)	341
Can electrophysiology differentiate polyneuropathy with anti-MAG/SGPG antibodies from chronic inflammatory demyelinating polyneuropathy? M. Capasso, F. Torrieri, A. Di Muzio, M.V. De Angelis, A. Lugaresi, A. Uncini (Italy)	346
Non-invasive monitoring of functionally distinct muscle activations during swallowing M.J. McKeown, D.C. Torpey, W.C. Gehm (USA)	354
Time-related changes of excitability of the human motor system contingent upon immobilisation of the ring and little fingers S. Facchini, M. Romani, M. Tinazzi, S.M. Aglioti (Italy)	367
Inter- and intra-individual variability of paired-pulse curves with transcranial magnetic stimulation (TMS) F. Maeda, M. Gangitano, M. Thall, A. Pascual-Leone (USA, Spain)	376
Semantic bias, homograph comprehension, and event-related potentials in schizophrenia D.F. Salisbury, M.E. Shenton, P.G. Nestor, R.W. McCarley (USA)	383
Temporal resolution in young and elderly subjects as measured by mismatch negativity and a psychoacoustic gap detection task S. Bertoli, J. Smurzynski, R. Probst (Switzerland)	396
Maturation of human central auditory system activity: separating auditory evoked potentials by dipole source modeling C. Ponton, J.J. Eggermont, D. Khosla, B. Kwong, M. Don (USA, Canada)	407
Habituation of the auditory evoked field component N100m and its dependence on stimulus duration T. Rosburg, J. Haueisen, H. Sauer (Germany)	421
Ritanserin, a serotonin-2 receptor antagonist, improves ultradian sleep rhythmicity in young poor sleepers A.U. Viola, G. Brandenberger, M. Toussaint, P. Bouhours, J.P. Macher, R. Luthringer (France)	429
Electroencephalographic measurement of possession trance in the field T. Oohashi, N. Kawai, M. Honda, S. Nakamura, M. Morimoto, E. Nishina, T. Maekawa (Japan)	435
Effects of intravenous mannitol on EEG recordings in stroke patients Z. Huang, W. Dong, Y. Yan, Q. Xiao, Y. Man (People's Republic of China)	446
Effects of intravenous human albumin and furosemide on EEG recordings in patients with intracerebral hemorrhage Z. Huang, W. Dong, Y. Yan, Q. Xiao, Y. Man (People's Republic of China)	454
Spatial congruence of neuronavigated transcranial magnetic stimulation and functional neuroimaging U. Herwig, K. Köbel, A.P. Wunderlich, A. Thielscher, C. von Tiesenhäusen, M. Spitzer, C. Schönfeldt-Lecuona (Germany)	462
Comparison of direct and indirect measurements of the central motor conduction time in the monkey E. Olivier, S.N. Baker, R.N. Lemon (UK, Belgium)	469
Motor evoked responses from the thigh muscles to the stimulation of the upper limb nerves in patients with late poliomyelitis C. Ertekin, A.Y. On, Y. Kirazlı, T. Kurt, N. Gürgör (Turkey)	478
Abnormal neural encoding of repeated speech stimuli in noise in children with learning problems B. Wible, T. Nicol, N. Kraus (USA)	485
Mismatch negativity evoked by the McGurk-MacDonald effect: a phonetic representation within short-term memory C. Colin, M. Radeau, A. Soquet, D. Demolin, F. Colin, P. Deltenre (Belgium)	495
Electrophysiology of spatial scene analysis: the mismatch negativity (MMN) is sensitive to the ventriloquism illusion C. Colin, M. Radeau, A. Soquet, B. Dachy, P. Deltenre (Belgium)	507
Mismatch negativity to single and multiple pitch-deviant tones in regular and pseudo-random complex tone sequences M. Vaz Pato, S.J. Jones, N. Perez, L. Sprague (UK)	519
Selective effects of ageing on vestibular-dependent lower limb responses following galvanic stimulation M.S. Welgampola, J.G. Colebatch (Australia)	528
New concept for the recovery function of short-latency somatosensory evoked cortical potentials following median nerve stimulation M. Hoshiyama, R. Kakigi (Japan)	535
The correlation between physiological and psychological responses to odour stimulation in human subjects L. Wang, V.E. Walker, H. Sardi, C. Fraser, T.J.C. Jacob (UK)	542
Agrypnia Excitata: a generalized overactivity syndrome and a useful concept in the neurophysiopathology of sleep P. Montagna, E. Lugaresi (Italy)	552

Cortical EEG topography of REM onset: the posterior dominance of middle and high frequencies L. De Gennaro, M. Ferrara, G. Curcio, R. Cristiani, M. Bertini (Italy)	561
A new design of a polysomnography-based multi-center treatment study for the restless legs syndrome T. Penzel, U. Brandenburg, J.H. Peter, R. Otto, H.P. Hundemer, A. Lledo, T.C. Wetter, C. Trenkwalder, for the PEARLS Study Group (Germany, USA)	571
EEG coherence in attention-deficit/hyperactivity disorder: a comparative study of two DSM-IV types R.J. Barry, A.R. Clarke, R. McCarthy, M. Selikowitz (Australia)	579
Picrotoxin-induced generalised convulsive seizure in rat: changes in regional distribution and frequency of the power of electroencephalogram rhythms L. Mackenzie, A. Medvedev, J.J. Hiscock, K.J. Pope, J.O. Willoughby (Australia)	586
Cortical silent period in two patients with meningioma and preoperative seizures: a pre- and postsurgical follow-up study M. Cincotta, A. Borgheresi, F. Benvenuti, P. Liotta, E. Marin, G. Zaccara (Italy)	597
EEG analysis with simulated neuronal cell models helps to detect pre-seizure changes K. Schindler, R. Wiest, M. Kollar, F. Donati (Switzerland)	604
Clinical, electrophysiological and immunological remissions after thymectomy in myasthenia gravis A. Kostera-Pruszczyk, B. Emeryk-Szajewska, J. Świtalska, H. Strugalska-Cynowska, K. Rowińska-Marcińska, T. Nowak-Michalska, B. Szyluk (Poland)	615
Effects of acute stimulation through contacts placed on the motor cortex for chronic stimulation R. Hanajima, P. Ashby, A.E. Lang, A.M. Lozano (Canada)	635
Task-specific modulation of anticipatory postural adjustments in individuals with hemiparesis H. Slijper, M.L. Latash, N. Rao, A.S. Aruin (USA)	642
Contribution of GABAergic cortical circuitry in shaping somatosensory evoked scalp responses: specific changes after single-dose administration of tiagabine D. Restuccia, M. Valeriani, E. Grassi, G. Gentili, S. Mazza, P. Tonali, F. Mauguière (Italy, France)	656
Neural mechanisms for generation of tactile interference effects on somatosensory evoked magnetic fields in humans M. Tanosaki, A. Suzuki, R. Takino, T. Kimura, Y. Iguchi, Y. Kurobe, Y. Haruta, Y. Hoshi, I. Hashimoto (Japan)	672
Effects of aging and sex on middle-latency somatosensory evoked potentials: normative data D. Zumsteg, H.G. Wieser (Switzerland)	681
Lower number of K-complexes and K-alphas in sleep bruxism: a controlled quantitative study G.J. Lavigne, P.H. Rompré, F. Guitard, B.J. Sessle, T. Kato, J.Y. Montplaisir (Canada)	686
Electroencephalogram processing using neural networks C. Robert, J.-F. Gaudy, A. Limoge (France)	694
A standardized boundary element method volume conductor model M. Fuchs, J. Kastner, M. Wagner, S. Hawes, J.S. Ebersole (Germany, USA)	702
Systematic source estimation of spikes by a combination of independent component analysis and RAP-MUSIC I: Principles and simulation study K. Kobayashi, T. Akiyama, T. Nakahori, H. Yoshinaga, J. Gotman (Japan, Canada)	713
Systematic source estimation of spikes by a combination of independent component analysis and RAP-MUSIC II: Preliminary clinical application K. Kobayashi, T. Akiyama, T. Nakahori, H. Yoshinaga, J. Gotman (Japan, Canada)	725
Detection and description of non-linear interdependence in normal multichannel human EEG data M. Breakspear, J.R. Terry (Australia)	735
On the time resolution of event-related desynchronization: a simulation study T.R. Knösche, M.C.M. Bastiaansen (Germany, The Netherlands)	754
Task-related EEG and ERP changes without performance impairment following a single dose of phenytoin S.S. Chung, L.K. McEvoy, M.E. Smith, A. Gevins, K. Meador, K.D. Laxer (USA)	806
Assessing cerebral dysfunction with probe-evoked potentials in a CNV task – a study in alcoholics H.M. Olbrich, H. Maes, G. Valerius, J.M. Langosch, H. Gann, B. Feige (Germany)	815
Probability interrelations between pre-/post-stimulus intervals and ERD/ERS during a memory task A.A. Fingelkurts, A.A. Fingelkurts, C.M. Krause, M. Sams (Finland, Russia)	826
The costs of freedom: an ERP – study of non-canonical sentences M. Matzke, H. Mai, W. Nager, J. Rüsseler, T. Münte (Germany)	844
Visual and auditory event-related potentials in sporadic amyotrophic lateral sclerosis K.S. Paulus, I. Magnano, M.R. Piras, M.A. Solinas, G. Solinas, G.F. Sau, I. Aiello (Italy)	853
Electric brain responses to inappropriate harmonies during listening to expressive music S. Koelsch, J. Mulder (USA, The Netherlands)	862
Maturation of cortical sound processing as indexed by event-related potentials R. Čeponienė, T. Rinne, R. Näätänen (Finland)	870
Time-dependent variation in cerebral and autonomic activity during periodic leg movements in sleep: implications for arousal mechanisms E. Sforza, C. Juony, V. Ibanez (Switzerland)	883

Spontaneous sleep interruptions during extended nights. Relationships with NREM and REM sleep phases and effects on REM sleep regulation	
G. Barbato, C. Barker, C. Bender, T.A. Wehr (USA)	892
Age effects on visual EEG responses reveal distinct frontal alpha networks	
V. Kolev, J. Yordanova, C. Basar-Eroglu, E. Basar (Bulgaria, Germany, Turkey)	901
Relative utility of sphenoidal and temporal surface electrodes for localization of ictal onset in temporal lobe epilepsy	
S. Mintzer, J.S. Nicholl, J.M. Stern, J. Engel Jr (USA)	911
Reproducibility of hemispheric blood flow increases during line bisectioning	
A. Flöel, H. Lohmann, C. Breitenstein, B. Dräger, A. Buyx, H. Henningsen, S. Knecht (Germany)	917
High voltage electrical stimulation of the proximal hypoglossal nerve in normal subjects	
A. Inaba, T. Yokota, A. Otagiri, T. Nishimura, Y. Saito, T. Kanouchi, H. Mizusawa (Japan)	925
Prediction of movement following noxious stimulation during 1 minimum alveolar anesthetic concentration isoflurane/nitrous oxide anesthesia by means of middle latency auditory evoked responses	
L. Leistriz, E. Kochs, M. Galicki, H. Witte (Germany)	930
Motor disinhibition in affected and unaffected hemisphere in the early period of recovery after stroke	
P. Manganotti, S. Patuzzo, F. Cortese, A. Palermo, N. Smania, A. Fiaschi (Italy)	936
Repetitive paired-pulse transcranial magnetic stimulation affects corticospinal excitability and finger tapping in Parkinson's disease	
M. Sommer, T. Kamm, F. Tergau, G. Ulm, W. Paulus (Germany)	944
Decrease of middle cerebral artery blood flow velocity after low-frequency repetitive transcranial magnetic stimulation of the dorsolateral prefrontal cortex	
J.D. Rollnik, A. Diesterhöft, J. Däuper, A. Kossev, K. Weissenborn, R. Dengler (Germany, Bulgaria)	951
High-resolution EEG mapping: a radial-basis function based approach to the scalp Laplacian estimate	
D. Yao (People's Republic of China)	956
Distinct fronto-central N60 and supra-sylvian N70 middle-latency components of the median nerve SEPs as assessed by scalp topographic analysis, dipolar source modelling and depth recordings	
C. Barba, M. Frot, M. Valeriani, P. Tonali, F. Mauguière (Italy, France)	981
Movement interference attenuates somatosensory high-frequency oscillations: contribution of local axon collaterals of 3b pyramidal neurons	
M. Tanosaki, T. Kimura, R. Takino, Y. Iguchi, A. Suzuki, Y. Kurobe, Y. Haruta, Y. Hoshi, I. Hashimoto (Japan)	993
Intrathalamic non-propagating generators of high-frequency (1000 Hz) somatosensory evoked potential (SEP) bursts recorded subcortically in man	
F. Klostermann, R. Gobbele, H. Buchner, G. Curio (Germany)	1001
High intensity magnetic stimulation over the lumbosacral spine evokes antinociception in rats	
V.W.-H. Lin, I. Hsiao, W.S. Kingery (USA)	1006
Cortical potentials related to assessment of pain intensity with visual analogue scale (VAS)	
M. Kanda, M. Matsushashi, N. Sawamoto, T. Oga, T. Mima, T. Nagamine, H. Shibasaki (Japan)	1013
Diazepam-enhanced β activity in Sturge Weber syndrome: its diagnostic significance in comparison with MRI	
F.E. Jansen, A.C. van Huffelen, T. Witkamp, A. Couperus, N. Teunissen, G.H. Wieneke, O. van Nieuwenhuizen (The Netherlands)	1025
PLEDs in Creutzfeldt-Jakob disease following a cadaveric dural graft	
M. Fushimi, K. Sato, T. Shimizu, H. Hadeishi (Japan)	1030
EEG evidence for a new conceptualisation of attention deficit hyperactivity disorder	
A.R. Clarke, R.J. Barry, R. McCarthy, M. Selikowitz, C.R. Brown (Australia)	1036
EEG harmonic responses to photic stimulation in normal aging and Alzheimer's disease: differences in interhemispheric coherence	
M. Kikuchi, Y. Wada, T. Takeda, H. Oe, T. Hashimoto, Y. Koshino (Japan)	1045
A new EEG method for estimating cortical neuronal impairment that is sensitive to early stage Alzheimer's disease	
T. Musha, T. Asada, F. Yamashita, T. Kinoshita, Z. Chen, H. Matsuda, M. Uno, W.R. Shankle (Japan, USA)	1052
EEG synchronization upon reward in man	
M. Hallschmid, M. Mölle, S. Fischer, J. Born (Germany)	1059
Effect of amyotrophic lateral sclerosis serum on calcium channels related to spontaneous acetylcholine release	
S. Muchnik, A. Losavio, S.D. Lorenzo (Argentina)	1066
The cause of slowed forearm median conduction velocity in carpal tunnel syndrome: a Palmar stimulation study	
M.-H. Chang, S.-J. Wei, H.-L. Chiang, H.-M. Wang, P.F. Hsieh, S.-Y. Huang (Taiwan, ROC)	1072
Multi-MUP analysis of laryngeal muscles	
M.K. Koivu, S.K. Jäskeläinen, B.B. Falck (Finland)	1077
Combined monitoring of motor and somatosensory evoked potentials in orthopaedic spinal surgery	
L. Pelosi, J. Lamb, M. Grevitt, S.M.H. Mehdian, J.K. Webb, L.D. Blumhardt (UK)	1082
Post-exercise facilitation and depression of M wave and motor evoked potentials in healthy subjects	
M. Lentz, J.F. Nielsen (Denmark)	1092

Early and late inhibition in the human motor cortex studied by paired stimulation through subdural electrodes K. Matsunaga, N. Akamatsu, T. Uozumi, E. Urasaki, S. Tsuji (Japan)	1099
Influence of internal globus pallidus stimulation on motor cortex activation pattern in Parkinson's disease D. Devos, Ph. Derambure, J.L. Bourriez, D.F. Cassim, S. Blond, J.D. Guieu, A. Destée, L. Defebvre (France)	1110
The correlation between muscle and nerve fiber conduction velocities in thenar muscle is lost in case of carpal tunnel syndrome M. El Dassouki, J.-P. Lefaucheur (France)	1121
Movement-related EEG potentials are force or end-effector dependent: evidence from a multi-finger experiment S. Slobounov, J. Johnston, H. Chiang, W. Ray (USA)	1125
Intensity-dependent effects of 1 Hz rTMS on human corticospinal excitability P.B. Fitzgerald, T.L. Brown, Z.J. Daskalakis, R. Chen, J. Kulkarni (Australia, Canada)	1136
Multi-channel EMG of the M. triceps brachii in rats during treadmill locomotion N.P. Schumann, F.H.W. Biedermann, B.U. Kleine, D.F. Stegeman, K. Roeleveld, R. Hackert, H.Ch. Scholle (Germany, The Netherlands, Norway)	1142
Thalamocortical dysrhythmia and the thalamic reticular nucleus in behaving rats G. Marini, P. Ceccarelli, M. Mancina (Italy)	1152
Variation in the response to transcranial magnetic brain stimulation in the general population E.M. Wassermann (USA)	1165
Inhibition, response mode, and stimulus probability: a comparative event-related potential study K.J. Bruin, A.A. Wijers (The Netherlands)	1172
Topographical changes in N1-P2 amplitude upon awakening from recovery sleep after slow-wave sleep deprivation M. Ferrara, L. De Gennaro, F. Ferlazzo, G. Curcio, R. Cristiani, M. Bertini (Italy)	1183
EEG differences between good and poor responders to methylphenidate in boys with the inattentive type of attention-deficit/hyperactivity disorder A.R. Clarke, R.J. Barry, R. McCarthy, M. Selikowitz, R.J. Croft (Australia)	1191
Development of the EEG from 5 months to 4 years of age P.J. Marshall, Y. Bar-Haim, N.A. Fox (USA, Israel)	1199
Semantic geodesic maps: a unifying geometrical approach for studying the structure and dynamics of single trial evoked responses N.A. Laskaris, A.A. Ioannides (Japan)	1209
Repetitive hypoglossal nerve stimulation in myasthenia gravis Y.L. Lo, T.H. Leoh, Y.E. Tan, M.L. Foo, Y.F. Dan, P. Ratnagopal (Singapore)	1227
F wave duration in mild S1 radiculopathy: comparison between the affected and unaffected sides M. Toyokura, T. Furukawa (Japan)	1231
Does direct measurement of forearm mixed nerve conduction velocity reflect actual nerve conduction velocity through the carpal tunnel? M.-H. Chang, S.-J. Wei, H.-L. Chiang, H.-M. Wang, P.F. Hsieh, S.-Y. Huang (Taiwan)	1236
Effects of long-term Donepezil therapy on rCBF of Alzheimer's patients F. Nobili, P. Vitali, M. Canfora, N. Girtler, C. De Leo, G. Mariani, A. Pupi, G. Rodriguez (Italy)	1241
Modulation of input-output curves by low and high frequency repetitive transcranial magnetic stimulation of the motor cortex M. Gangitano, A. Valero-Cabré, J.M. Tormos, F.M. Mottaghy, J.R. Romero, Á. Pascual-Leone (USA, Spain)	1249
Botulinum neurotoxin serotypes A and C do not affect motor units survival in humans: an electrophysiological study by motor units counting R. Eleopra, V. Tugnoli, R. Quatrala, E. Gastaldo, O. Rossetto, D. De Grandis, C. Montecucco (Italy)	1258
Differential effect of current rise time on short and medium latency vestibulospinal reflexes S.M. Rosengren, J.G. Colebatch (Australia)	1265
Congenital hemiparesis: different functional reorganization of somatosensory and motor pathways A. Ragazzoni, M. Cincotta, A. Borgheresi, G. Zaccara, U. Ziemann (Italy, Germany)	1273
The effects of subthreshold 1 Hz repetitive TMS on cortico-cortical and interhemispheric coherence L.H.A. Strens, A. Oliviero, B.R. Bloem, W. Gerschlagel, J.C. Rothwell, P. Brown (UK, Italy, Netherlands, Austria)	1279
Different patterns of excitation and inhibition of the small hand and forearm muscles from magnetic brain stimulation in humans L. Wu, Y. Goto, T. Taniwaki, N. Kinukawa, S. Tobimatsu (Japan)	1286
Increased post-exercise facilitation of motor evoked potentials in multiple sclerosis J.F. Nielsen, P. Nørgaard (Denmark)	1295
Different patterns of I-waves summation in ALS patients according to the central conduction time A. Quartarone, F. Battaglia, G. Majorana, V. Rizzo, S. Bagnato, C. Messina, P. Girlanda (Italy)	1301
Dual modulating effects of amphetamine on neuronal excitability and stimulation-induced plasticity in human motor cortex U. Ziemann, A. Tam, C. Bütefisch, L.G. Cohen (USA)	1308
Abnormal conditioning effect of transcranial magnetic stimulation on soleus H-reflex during voluntary movement in Parkinson's disease H. Morita, M. Shindo, S. Morita, T. Hashimoto, T. Tada, S. Ikeda (Japan)	1316

Time-dependent structure in the discharge rate of human motor units D.E. Vaillancourt, L. Larsson, K.M. Newell (USA)	1325
Comparison of the N300 and N400 ERPs to picture stimuli in congruent and incongruent contexts J.P. Hamm, B.W. Johnson, I.J. Kirk (New Zealand)	1339
Anatomical localization and intra-subject reproducibility of laser evoked potential source in cingulate cortex, using a realistic head model D.E. Bentley, P.D. Youell, A.K.P. Jones (UK)	1351
Evidence of auditory processing during postoperative propofol sedation H. Yppärilä, J. Karhu, S. Westerén-Punnonen, T. Musialowicz, J. Partanen (Finland)	1357
Human EEG responses to controlled alterations of the Earth's magnetic field A. Sastre, C. Graham, M.R. Cook, M.M. Gerkovich, P. Gailey (USA)	1382
EEG and evoked potential recording from the subthalamic nucleus for deep brain stimulation of intractable epilepsy D.S. Dinner, S. Neme, D. Nair, E.B. Montgomery Jr, K.B. Baker, A. Rezai, H.O. Lüders (USA)	1391
Low-probability event-detection and separation via statistical wavelet thresholding: an application to psychophysiological denoising M. Browne, T.R.H. Cutmore (Australia)	1403
A new technique for the analysis of background and evoked EEG activity: time and amplitude distributions of the EEG deflections V. Rodionov, C. Goodman, L. Fisher, G.-Z. Rosenstein, H. Sohmer (Israel)	1412
Discriminant analysis of various concentric needle EMG and macro-EMG parameters in detecting myopathic abnormality B. Cengiz, F. Ozdag, U.H. Ulas, Z. Odabasi, O. Vural (Turkey)	1423
An evaluation of gender, obesity, age and diabetes mellitus as risk factors for carpal tunnel syndrome J. Becker, D.B. Nora, I. Gomes, F.F. Stringari, R. Seitensius, J.S. Panosso, J.A.C. Ehlers (Brazil)	1429
rTMS over the cerebellum can increase corticospinal excitability through a spinal mechanism involving activation of peripheral nerve fibres W. Gerschlagel, L.O.D. Christensen, S. Bestmann, J.C. Rothwell (UK, Austria)	1435
Nausea as a complication of low-frequency repetitive transcranial magnetic stimulation of the posterior fossa T. Satow, T. Mima, H. Hara, T. Oga, A. Ikeda, N. Hashimoto, H. Shibasaki (Japan)	1441
Motor-related cortical potentials accompanying enslaving effect in single versus combination of fingers force production tasks S. Slobounov, J. Johnston, H. Chiang, W.J. Ray (USA)	1444
Error-related negativity and correct response negativity in schizophrenia A.T. Bates, K.A. Kiehl, K.R. Laurens, P.F. Liddle (Canada, UK, USA)	1454
Vestibular evoked myogenic potentials in multiple sclerosis patients M. Versino, S. Colnaghi, R. Callicco, R. Bergamaschi, A. Romani, V. Cosi (Italy)	1464
Maturational change of parallel auditory processing in school-aged children revealed by simultaneous recording of magnetic and electric cortical responses K. Takeshita, T. Nagamine, D.H.D. Thuy, T. Satow, M. Matsushashi, J. Yamamoto, M. Takayama, N. Fujiwara, H. Shibasaki (Japan)	1470
Assessment of mechanical and thermal thresholds of human C nociceptors during increases in skin sympathetic nerve activity M. Watanabe, S. Toma, M. Murakami, I. Shimoyama, Y. Nakajima, H. Moriya (Japan)	1485
Enlarged SI and SII somatosensory evoked responses in the CLN5 form of neuronal ceroid lipofuscinosis L. Lauronen, J. Huttunen, E. Kirveskari, H. Wikström, K. Sainio, T. Autti, P. Santavuori (Finland)	1491
Visual and motor cortex excitability: a transcranial magnetic stimulation study B. Boroojerdi, I.G. Meister, H. Foltys, R. Sparing, L.G. Cohen, R. Töpper (Germany, USA)	1501
Circasemidian 12 h cycle of slow wave sleep under constant darkness M. Hayashi, T. Morikawa, T. Hori (Japan)	1505
Age difference in heart rate changes associated with micro-arousals in humans N. Gosselin, M. Michaud, J. Carrier, G. Lavigne, J. Montplaisir (Canada)	1517
Transcranial electrical stimulation: significance of fast versus slow charge delivery for intra-operative monitoring O.N. Hausmann, K. Min, N. Boos, Y.A. Ruetsch, T. Erni, A. Curt (Switzerland)	1532
Transcranial magnetic stimulation after pure motor stroke G. Pennisi, G. Alagona, G. Rapisarda, F. Nicoletti, E. Costanzo, R. Ferri, M. Malaguarnera, R. Bella (Italy)	1536
Preparatory slow potentials and event-related potentials in an auditory cued attention task E.J. Golob, H. Pratt, A. Starr (USA)	1544
The auditory C-process of spectral profile analysis S.J. Jones, N. Perez (UK)	1558
Comparison between the analysis of the loudness dependency of the auditory N1/P2 component with LORETA and dipole source analysis in the prediction of treatment response to the selective serotonin reuptake inhibitor citalopram in major depression C. Mulert, G. Juckel, H. Augustin, U. Hegerl (Germany)	1566

Role of human SII cortices in sensorimotor integration	
K. Inoue, T. Yamashita, T. Harada, S. Nakamura (Japan)	1573
Effects of attention, distraction and sleep on CO ₂ laser evoked potentials related to C-fibers in humans	
Y. Qiu, K. Inui, X. Wang, T.D. Tran, R. Kakigi (Japan)	1579
Magnetoencephalographic study of speed-dependent responses in apparent motion	
H. Bakardjian, A. Uchida, H. Endo, T. Takeda (Japan)	1586
Arousal, EEG spectral power and pulse transit time in UARS and mild OSAS subjects	
D. Poyares, C. Guilleminault, A. Rosa, M. Ohayon, U. Koester (USA)	1598
Sleep/wake cycles in the dark: sleep recorded by polysomnography in 26 totally blind subjects compared to controls	
D. Leger, C. Guilleminault, C. Santos, M. Paillard (France, USA)	1607
The effects of normal aging on sleep spindle and K-complex production	
K. Crowley, J. Trinder, Y. Kim, M. Carrington, I.M. Colrain (Australia, USA)	1615
Acute mobile phone operation affects neural function in humans	
R.J. Croft, J.S. Chandler, A.P. Burgess, R.J. Barry, J.D. Williams, A.R. Clarke (Australia, UK)	1623
Assessment of postoperative sedation level with spectral EEG parameters	
H. Yppärilä, I. Korhonen, S. Westerén-Punnonen, T. Musialowicz, J. Partanen, E. Ruokonen (Finland)	1633
Is 'gamma' (40 Hz) synchronous activity disturbed in patients with traumatic brain injury?	
S. Slewa-Younan, A.M. Green, I.J. Baguley, K.L. Felmingham, A.R. Haig, E. Gordon (Australia)	1640
Correlation between spectral EEG parameters and intelligence test variables in school-age children	
R.G. Schmid, W.S. Tirsch, H. Scherb (Germany)	1647
The oscillatory activity in the Parkinsonian subthalamic nucleus investigated using the macro-electrodes for deep brain stimulation	
X. Liu, H.L. Ford-Dunn, G.N. Hayward, D. Nandi, R.C. Miall, T.Z. Aziz, J.F. Stein (UK)	1667
Direct demonstration of long latency cortico-cortical inhibition in normal subjects and in a patient with vascular parkinsonism	
V. Di Lazzaro, A. Oliviero, P. Mazzone, F. Pilato, E. Saturno, A. Insola, M. Visocchi, C. Colosimo, P.A. Tonali, J.C. Rothwell (Italy, UK)	1673
Effect of discharge desynchronization on the size of motor evoked potentials: an analysis	
K.M. Rösler, E. Petrow, J. Mathis, Z. Arányi, C.W. Hess, M.R. Magistris (Switzerland)	1680
Different mechanisms contribute to motor cortex hyperexcitability in amyotrophic lateral sclerosis	
G. Zanette, S. Tamburin, P. Manganotti, N. Refatti, A. Forgiione, N. Rizzuto (Italy)	1688
Hip angle induced modulation of H reflex amplitude, latency and duration in spinal cord injured humans	
M. Knikou, W.Z. Rymer (USA)	1698
Interaction effects of galvanic vestibular stimulation and head position on the soleus H reflex in humans	
P.M. Kennedy, J.T. Inglis (Canada)	1709
Linking neurophysiological and neuropsychological measures for aphasia assessment	
Y. Marchand, R.C.N. D'Arcy, J.F. Connolly (Canada)	1715
Skin potential response in letter recognition task as an alternative communication channel for individuals with severe motor disability	
R. Tsukahara, H. Aoki (Japan)	1723
Brain responses to number sequences with and without active task requirement	
S. Lang, B. Kotchoubey (Germany)	1734
Effects of task difficulty on evoked gamma activity and ERPs in a visual discrimination task	
D. Senkowski, C.S. Herrmann (Germany)	1742
Target and non-target ERP disturbances in first episode vs. chronic schizophrenia	
K.J. Brown, C.J. Gonsalvez, A.W.F. Harris, L.M. Williams, E. Gordon (Australia)	1754
Pattern ERG and VEP maturation in schoolchildren	
J. Breclj, M. Štrucl, I. Zidar, M. Tekavčič-Pompe (Slovenia)	1764
Effects of sustained, voluntary attention on amplitude and latency of steady-state visual evoked potential: a costs and benefits analysis	
F. Di Russo, D. Spinelli (Italy)	1771
Early secondary somatosensory area (SII) SEPs. Data from intracerebral recordings in humans	
C. Barba, M. Frot, F. Mauguère (Italy, France)	1778
The profile of the recovery cycle in human primary and secondary somatosensory cortex: a magnetoencephalography study	
Y. Hamada, S. Otsuka, T. Okamoto, R. Suzuki (USA, Japan)	1787
The effects of stimulus rates on high frequency oscillations of median nerve somatosensory-evoked potentials – direct recording study from the human cerebral cortex	
E. Urasaki, T. Genmoto, N. Akamatsu, S.-i. Wada, A. Yokota (Japan)	1794
Sleep organization pattern as a prognostic marker at the subacute stage of post-traumatic coma	
M. Valente, F. Placidi, A.J. Oliveira, A. Bigagli, I. Morghen, R. Proietti, G.L. Gigli (Italy)	1798
Sleep cyclic alternating pattern in normal school-age children	
O. Bruni, R. Ferri, S. Miano, E. Verrillo, E. Vittori, G. Della Marca, B. Farina, G. Mennuni (Italy)	1806

Actigraphic assessment of sleep-wake rhythm during the first 6 months of life B. Gniodovec, D. Neubauer, J. Zidar (Slovenia)	1815
DC-EEG discloses prominent, very slow activity patterns during sleep in preterm infants S. Vanhatalo, P. Tallgren, S. Andersson, K. Sainio, J. Voipio, K. Kaila (Finland)	1822
An automatic method for the recognition and classification of the A-phases of the cyclic alternating pattern C. Navona, U. Barcaro, E. Bonanni, F. Di Martino, M. Maestri, L. Murri (Italy)	1826
Reference values of motor unit potentials (MUPs) of the external anal sphincter muscle A.P. Del Rey, B.F. Entrena (Spain)	1832
Selective attention to spatial frequency: an ERP and source localization analysis J.M.P. Baas, J.L. Kenemans, G.R. Mangun (USA, The Netherlands)	1840
Role of short latency evoked potentials in the diagnosis of brain death E. Facco, M. Munari, F. Gallo, S.M. Volpin, A.U. Behr, F. Baratto, G.P. Giron (Italy)	1855
Event-related alpha and theta responses in a visuo-spatial working memory task M.C.M. Bastiaansen, D. Posthuma, P.F.C. Groot, E.J.C. de Geus (The Netherlands)	1882
Dopamine modulates involuntary attention shifting and reorienting: an electromagnetic study S. Kähkönen, J. Ahveninen, E. Pekkonen, S. Kaakkola, J. Huttunen, R.J. Ilmoniemi, I.P. Jääskeläinen (Finland, USA)	1894
Non-spatial attentional effects on P1 M.J. Taylor (France)	1903
Temporal integration: intentional sound discrimination does not modulate stimulus-driven processes in auditory event synthesis E. Sussman, I. Winkler, J. Kreuzer, M. Saher, R. Näätänen, W. Ritter (USA, Hungary, Finland)	1909
Spatiotemporal analysis of the neuromagnetic response to rhythmic auditory stimulation: rate dependence and transient to steady-state transition F.W. Carver, A. Fuchs, K.J. Jantzen, J.A.S. Kelso (USA)	1921
Optimized stimulation and recording parameters of human 'nociception specific' blink reflex recordings Z. Katsarava, J. Ellrich, H.C. Diener, H. Kaube (Germany, UK)	1932
Source localization of MEG sleep spindles and the relation to sources of alpha band rhythms I. Manshanden, J.C. De Munck, N.R. Simon, F.H. Lopes da Silva (The Netherlands, USA)	1937
Does the prion protein gene 129 codon polymorphism influence sleep? Evidence from a fatal familial insomnia kindred G. Plazzi, P. Montagna, M. Beelke, L. Nobili, F. De Carli, P. Cortelli, S. Vandi, P. Avoni, P. Tinuper, P. Gambetti, E. Lugaresi, F. Ferrillo (Italy, USA)	1948
EEG in schizophrenic patients: mutual information analysis S.H. Na, S.-H. Jin, S.Y. Kim, B.-J. Ham (South Korea)	1954
Interictal spike EEG source analysis in hypothalamic hamartoma epilepsy A.J.R. Leal, V. Passão, E. Calado, J.P. Vieira, J.P. Silva Cunha (Portugal)	1961
Bilateral spike-and-wave discharges in a hemi-deafferented cortex M. Inghilleri, A. Clemenzi, A. Conte, V. Frasca, M. Manfredi (Italy)	1970
Oscillatory cortical drive to isometrically contracting muscle in Unverricht-Lundborg type progressive myoclonus epilepsy (ULD) T. Silén, N. Forss, S. Salenius, T. Karjalainen, R. Hari (Finland)	1973
Natural history of ulnar entrapment at elbow L. Padua, I. Aprile, P. Caliandro, M. Foschini, S. Mazza, P. Tonali (Italy)	1980
Imaging of neural conduction block by neuromagnetic recording Y. Fukuoka, H. Komori, S. Kawabata, H. Ohkubo, K. Shinomiya, O. Terasaki (Japan)	1985
Observations on intraoperative somatosensory evoked potential (SEP) monitoring in the semi-sitting position H. Wiedemayer, H. Schaefer, W. Armbruster, M. Miller, D. Stolke (Germany)	1993
Scalp-recorded Bereitschaftspotential is the result of the activity of cortical and subcortical generators – a hypothesis I. Rektor (Czech Republic)	1998
Cortico-motor excitability of the lower limb motor representation: a comparative study in Parkinson's disease and healthy controls F. Tremblay, L.E. Tremblay (Canada)	2006
Modulated cortical control of individual fingers in experienced musicians: an EEG study S. Slobounov, H. Chiang, J. Johnston, W. Ray (USA)	2013
Motor outcome after subcortical stroke: MEPs correlate with hand strength but not dexterity G.W. Thickbroom, M.L. Byrnes, S.A. Archer, F.L. Mastaglia (Australia)	2025
<i>Letters to the Editor</i>	
Combined scalp-thalamic EEG recording in sleep and epilepsy R. Wennberg, B. Pohlmann-Eden, R. Chen, A. Lozano (Canada)	1867
Reply to Dr Wennberg M. Velasco (Mexico)	1869
Comments D.S. Dinner, H.O. Lüders (USA)	1869

Book Reviews

Comprehensive care for people with epilepsy – M. Pfäfflin, R.T. Fraser, R. Thorbecke, U. Specht and P. Wolf (Eds.) S. Arroyo (Spain)	169
Channelopathies of the Nervous System – M.R. Rose and R.C. Griggs (Eds.) L. Gutmann (USA)	316
Clinical Neuromyology and Other Arguments and Essays, Pertinent and Impertinent J. Valls-Solé (Spain)	968
Mechanisms of synaptic transmission: bridging the gaps (1890–1990) – J.D. Robinson C. Solsona (Spain)	969
Clinical neurophysiology of the vestibular system – R.W. Baloh, V. Honrubia A.M. Bronstein (UK)	1657

Society Proceedings

Israel Society for Clinical Neurophysiology H. Sohmer, N. Gadoth (Israel)	171
Japanese Society of Clinical Neurophysiology (Formerly Japan Society of EEG and EMG), 31st Annual Meeting of Japanese Society of Clinical Neurophysiology, Tokyo, 7–9 November 2001 N. Chino (Japan)	971
55th Annual Meeting of the Eastern Association of Electroencephalographers, New York, 24 March 2001	1365
39th Annual Meeting of the SENFC (Spanish Society of Clinical Neurophysiology), Seville, Spain, 10–12 December 2001	1367
48th Congress of the Slovak and Czech Society of Clinical Neurophysiology, Nove Zamky, 25–27 October 2001 S. Nevsimalova (Czech Republic)	1658
Dutch Society of Clinical Neurophysiology	2030

<i>Index of Authors to Volume 113</i>	2032
<i>Index of Subjects to Volume 113</i>	2047
<i>Table of Contents to Volume 113</i>	2077

